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come to be distributed again. When a drouth begins, the protoplast develops a new layer of the cell membrane. A cell divides not more than twice between two drouths. Agamic reproduction may take place early in the year, by the cell dividing unequally into a smaller pigment cell and a large, simple reproductive spore (akinete.) The pigment body disintegrates, the wall weakens and this becomes a breaking point for the dividing up of the filament.

BACTERIA AID IN FORMATION OF EUROTIIUM

Sartory and Roger (C. R. Soc. Biol. Paris; 79: pp. 174-5) found, in a variety of *Aspergillus B* grown on damp straw, that they could secure promptly and abundantly and constantly the formation of perithecia, provided the culture was inoculated with microorganisms of the *B. mesentericus* group. Otherwise, he found, with pure cultures of the *Aspergillus* he could not get the *Eurotium* even with the aid of the various media hitherto suggested by students as valuable in this connection.

BACTERIAL INFECTION IN FRESH EGGS

Hadley and Caldwell (Bul. 164: R. I. State Col. Ag. Exp. Sta.) have discovered 8.7% of fresh eggs show bacterial infection of the yolk. The whites were sterile in all cases examined. The fertilization of the egg made no difference in the percentage. Forty different bacterial forms were found. There were no streptococci, and none of the groups causing hæmorrhagic septicæmia, enteritis, typhoid-dysentery, or diphtheria.

The study was instituted to throw light on the mortality of embryos in incubation, and the degree to which the mortality of chicks in brooders may be influenced by egg infection from mothers harboring the germs of diseases.

SOME REMARKABLE FEEDING ACTIONS OF AMEBÆ

Mast and Root (J. Exp. Zool. July, 1916) report studies of the capture of rotifers, paramecia, and other ciliates, by Ameba. They capture rotifers by flowing around the foot while attached. The protoplasm gradually flows upward along the stalk. The rotifer contracts in the effort to relieve the pressure; but when it extends

the ameba begins its flow again. In the meantime the rotifer is gradually weakened by the digestion of the foot. It may require days to engulf the rotifer.

In the capture of paramecia the amebæ take a sort of mushroom shape. The free margin is made irregular by numerous short pseudopodia. This furnishes a space beneath the umbrella and recesses at the margin in which paramecia tend to come to rest. Pseudopodia enclose the paramecia from either side. In some instances pseudopodia reached only about half the length of the paramecium and by turning toward the body of the prey compressed it so as to cut the animal in two,—engulfing only the inner half. This whole process required only about ten seconds. This was not an isolated incident, but was observed many times.

The writers, by computation based on the amount of pressure required to cut paramecia with a thin glass thread, have reached the conclusion that this amputation of paramecia by Ameba could not be explained by surface tension in the protoplasm of Ameba.

CASE OF BROODING IN HOLOTHURIANS

Ohshima (Ann. Zool. Japon., June, 1916) reports a new case of internal brooding in holothurians,—*Pseudocucumis africanus*. As many as 25 and 27 young were found in the body cavity of the mother. Three such brood-carrying individuals were found. The author was unable to discover either how fertilization occurs or the young escape.

EFFECTS OF ACTIVITY ON NERVE CELLS

Kocher (J. Comp. Neur., June, 1916) after fifteen separate experiments, completely controlled, on six different species of animals, using cells from various regions of the nervous system, reaches the conclusion that there is no deviation from the normal, either qualitative or quantitative, that can be revealed by the most exacting cytological tests in nerve cells even in the most advanced fatigue. He ascribes the varying results of former investigators to:—(1) difficulty in separating the effects of normal activity from unavoidable shock or injury to the nervous system in killing the animal; (2) post mortem changes taking place before complete fixation; (3)